

# ITS323 – Quiz 3

Name: \_\_\_\_\_ ID: \_\_\_\_\_ Marks: \_\_\_\_\_ (10)

## Question 1 [3 marks]

The path between SIIT Bangkadi and SIIT Rangsit is measured to have a power loss of 110dB. Both transmit and receive antenna's are identical, with a gain of 15dBi. Using a transmit power of 12dBW, what is the maximum receive power threshold for successful reception? Show your calculations.

## Question 2 [3 marks]

You are making a voice call via your computer (e.g. using Skype or similar software). The software, which uses a PCM encoder with 32 code numbers (or levels), generates data at a rate of 100kb/s.

- (a) What is the sampling period used by the encoder? [3 marks]

**Question 3** [4 marks]

The following signal was generated using frequency shift keying. The signalling rate is 50 signal elements per second. The first four bits of data are 0111.

- (a) What are the values of the remaining 8 bits? [4 marks] \_\_\_\_\_

Explain your answer.

